

**REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed July 7, 2004 (the "Office Action"). The Examiner rejects Claims 16, 18-20, and 22-32. Applicant respectfully requests reconsideration and favorable action in this case.

**Section 103 Rejections**

The Office Action rejects Claims 16, 18-20, and 22-32 under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 6,574,018 to Handelman ("*Handelman*") in view of U.S. Patent No. 5,583,683 to Scobey ("*Scobey*"). Applicant respectfully traverses these rejections for the reasons discussed below.

Claim 16 recites "increasing a spectrum width of a first optical channel space defined by a passband of a first filter by at least an amount equal to a spectrum width of a second optical channel space defined by a passband of a second filter to create a new optical channel space defined by an increased passband of the first filter."

The Office Action states that *Handelman* "fails to specifically teach that the first optical channel space is defined by a passband of a first filter, the second optical channel space is defined by a passband of a second filter, or that the newly created channel space is defined by an increased passband of the first filter." Office Action, page 3. The Office Action additionally discusses filters disclosed in *Scobey* and states that:

One skilled in the art would clearly have recognized that the bandpass [filter] of Scobey (Figure 4) could have been used as the bandpass filter of Handelman (reference numeral 130 in Figure 2). One skilled in the art would have been motivated to use the filter of Scobey since it allows for tunable multiplexing and demultiplexing functionality. Therefore, in implementing the bandpass filter of Scobey as the bandpass filter of Handelman, it would have been obvious to one skilled in the art at the time the invention was made to that the first optical channel space (including non-converted channels of Handelman) is defined by a passband of a first filter (reference numeral 72 in Figure 4 of Scobey), the second optical channel space (including the converted channels of Handelman) is defined by a passband of a second filter (reference numeral 86 in Figure 4 of Scobey), and that the newly created channel space is defined by an increased passband of the first filter (according to the ability to tune the passband of the filters of Scobey).

Office Action, pages 3-4. Applicants respectfully disagree.

First, neither *Handelman* nor *Scobey* disclose, teach or suggest, either alone or in combination, each element of Claim 16. For example, neither reference discloses a "new optical channel space defined by an increased passband of the first filter." As indicated above, the Office Action suggests this is disclosed in *Scobey* "according to the ability to tune the passband of the filters of *Scobey*," but there is no actual disclosure of increasing the passband of the first filter (reference numeral 72 in Figure 4 of *Scobey* according to the Office Action) by at least a spectrum width of the second optical channel space to create a new channel space.

Moreover, contrary to the assertions of the Office Action quoted above, it would not have been obvious in implementing the bandpass filter of *Scobey* (Figure 4) as the bandpass filter of *Handelman* (reference numeral 130 in Figure 2) such that the first optical channel space is defined by a passband of a first filter, the second optical channel space is defined by a passband of a second filter, and the newly created channel space is defined by an increased passband of the first filter.

For example, the Office Action suggests that *Handelman's* converted channels disclose the claimed second optical channel. See Office Action, page 2. These converted channels are optical signals carried over L separated channel wavelengths converted at wavelength converters 160 to channel wavelengths within the group of N channel wavelengths transmitted by filter 130. These L separated channel wavelengths are converted at converters 160 in *Handelman's* preferred embodiment specifically to allow them to pass through filter 130. Using filter 86 of *Scobey* at filter 130 of *Handelman* would not disclose a second optical channel space defined by a passband of a second filter since, as the Office Action asserts, *Handelman's* "second optical channel space" are the signals converted at converters 160. These converted signals would not, in any way, be defined by a passband of a second filter even if filter 86 of *Scobey* is used at filter 130 of *Handelman*.

In addition, the Office Action suggests that *Handelman's* combination of non-converted and converted wavelengths disclose the claimed new optical channel. *See* Office Action, page 2. This combination of non-converted and converted wavelengths of *Handelman* is merely the optical signals carried over channel wavelengths within the group of N channel wavelengths and the optical signals carried over channel wavelengths converted to channel wavelengths within the group of N channel wavelengths. Tuning filter 72 of *Scobey* used at filter 130 of *Handelman*, as suggested by the Office Action, would not provide the necessary disclosure of the claimed element because the new optical channel space would not in any way be defined by an increased passband of the first filter. The new channel space that the Office Action asserts that *Handelman* discloses is merely the combination of converted and non-converted channel wavelengths.

Furthermore, there is no motivation to combine *Handelman* and *Scobey* in the manner suggested by the Examiner. The M.P.E.P. sets forth a strict legal standard for finding obviousness based on a combination of references. According to the M.P.E.P., "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge [that was] generally available to one of ordinary skill in the art" at the time of the invention. M.P.E.P. § 2143.01. The "fact that references can be combined or modified does not render the resultant combination [or modification] obvious unless the prior art also suggests the desirability of the combination" or modification. *Id.* (emphasis in original).

The governing Federal Circuit case law makes this strict legal standard even more clear.<sup>1</sup> According to the Federal Circuit, "a showing of a suggestion, teaching, or motivation to combine . . . prior art references is an essential component of an obviousness holding." *In re Sang-Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25 (Fed. Cir. 2000)). "Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves,

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<sup>1</sup> Note MPEP 2145 X.C. ("The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references.").

the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). However, the "range of sources available . . . does not diminish the requirement for actual evidence." *Id.* In *In re Dembiczak*, the Federal Circuit reversed a finding of obviousness by the Board of Patent Appeals and Interferences, explaining that proper evidence of a teaching, suggestion, or motivation to combine is essential to avoid impermissible hindsight reconstruction of an applicant's invention:

Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references*. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.

175 F.3d at 999 (quoting *W.L. Gore & Assoc., Inv. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983)) (emphasis added) (citations omitted).<sup>2</sup>

In the present case, the Examiner is improperly using the Applicant's disclosure as a blueprint for piecing together various elements of the prior art. As indicated above, the Office Action suggests that "[o]ne skilled in the art would clearly have recognized that the bandpass [filter] of Scobey (Figure 4) could have been used as the bandpass filter of Handelman (reference numeral 130 in Figure 2). One skilled in the art would have been motivated to use the filter of Scobey since it allows for tunable multiplexing and demultiplexing functionality." Office Action, page 3. However, the mere fact that *Scobey* allows for tunable multiplexing and demultiplexing functionality does not provide the specific motivation required by the strict standards of the P.T.O. and the Federal Circuit to properly combine *Scobey* and *Handelman* as suggested by the Office Action (using filters of Figure 4 of *Scobey* as filter 130 of *Handelman*).

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<sup>2</sup> See also *In Re Jones*, 958 F.2d 347, 351 (Fed. Cir. 1992) ("Conspicuously missing from this record is any evidence, other than the PTO's speculation (if that can be called evidence) that one of ordinary skill in the herbicidal art would have been motivated to make the modification of the prior art salts necessary to arrive at" the claimed invention.).

Therefore, the Office Action has not shown either the disclosure of each element or the required motivation to make the proposed modification. Moreover, as indicated above, no such motivation exists. As failing to rigorously comply with the requirements imposed by the M.P.E.P., the P.T.O. and the Federal Circuit, Applicants respectfully submit that the rejection based on the proposed combination of *Scobey* and *Handelman* is improper. Therefore, for at least these reasons, Applicants respectfully submit that Claim 16 is patentable over the cited art used in the rejection and request that the rejection of Claim 16 be withdrawn.

Claims 18 and 24 depend from Claim 16 and therefore include all elements of Claim 16. Applicants thus respectfully request that the rejections of Claims 18 and 24 be withdrawn because, as discussed above, the cited art used in the rejections does not disclose, teach or suggest every element of Claim 16.

Claim 19 recites a second tunable filter operable to increase a second spectrum width of the second optical channel space defined by a passband of the second tunable filter by at least an amount equal to a first spectrum width of a first optical channel space defined by a passband of a first tunable filter to create a new optical channel space defined by an increased passband of the second tunable filter and having a third spectrum width. The Office Actions rejections of Claim 19 are similar to those of Claim 16. Applicants respectfully submit that Claim 19 is patentable over the cited art used in the rejection for similar reasons to those discussed above with respect to Claim 16. Applicants thus request that the rejection of Claim 19 be withdrawn.

Claims 25 and 26 depend from Claim 19 and therefore include all elements of Claim 19. Applicants thus respectfully request that the rejections of Claims 25 and 26 be withdrawn because, as discussed above, the cited art used in the rejections does not disclose, teach or suggest every element of Claim 19.

Claim 20 recites "dividing a first spectrum width of a first optical channel space defined by a passband of a first filter to create a second optical channel space defined by a decreased passband of the first filter and having a second spectrum width and a third optical channel space defined by a passband of a second filter having a third spectrum width." The Office Action suggests that *Handelman* discloses "fails to specifically teach that the first optical channel space is defined by a passband of a first filter, the second optical channel space is defined by a decreased passband of a first filter and having a second spectrum width, or a third optical channel space defined by a passband of a second filter having a third spectrum width." Office Action, page 6. The Office Action suggests that filter 72 of *Scobey* can be used as filter 130 of *Handelman* in a combination of the two references to teach the claimed elements. However, the portions of *Handelman* cited by the Office Action as disclosing elements of Claim 20 relate to optical cross-connects Figures 4-6 of *Handelman*. See Office Action, page 6. Even if filters of *Scobey* were used as filter 130 of *Handelman* as suggested at page 6 of the Office Action, there is no disclosure of all claimed elements since the portions of *Handelman* relied upon as disclosing the claimed division of the first spectrum width of a first optical channel space to create second and third optical channel spaces do not relate to filter 130 of *Handelman*. The divided first optical channel space would not be defined by a passband of a first filter, and the created second and third optical channel spaces would not be defined by a decreased passband of a second filter and a passband of a second filter, respectively.

Moreover, as indicated above with respect to Claim 16, the Office Action has not shown the required motivation to properly combine *Handelman* and *Scobey*; nor does such a motivation exist. Therefore, for at least these reasons, Applicants respectfully submit that Claim 20 is patentable over the cited art used in the rejection and request that the rejection of Claim 20 be withdrawn.

Claims 27 and 28 depend from Claim 20 and therefore include all elements of Claim 20. Applicants thus respectfully request that the rejections of Claims 27 and 28 be withdrawn because, as discussed above, the cited art used in the rejections does not disclose, teach or suggest every element of Claim 20.

Claim 22 recites similar elements as Claim 20. Applicants respectfully submit that Claim 22 is patentable over the cited art used in the rejection for similar reasons to those discussed above with respect to Claim 20. Applicants thus request that the rejection of Claim 22 be withdrawn.

Claims 29 and 30 depend from Claim 22 and therefore include all elements of Claim 22. Applicants thus respectfully request that the rejections of Claims 29 and 30 be withdrawn because, as discussed above, the cited art used in the rejections does not disclose, teach or suggest every element of Claim 22.

Claim 23 recites a plurality of passband filters each "operable to vary the initial spectrum width of at least one of the initial channels to form at least one new channel that utilizes a channel spacing of at least one of the initial channels." The Office Action suggests that *Scobey* discloses a plurality of filters. However, the Office Action cites no support in either *Handelman* or *Scobey* for a plurality of filters each operable to vary the initial spectrum width of at least one of the initial channels to form at least one new channel that utilizes a channel spacing of at least one of the initial channels. In addition, as discussed above with respect to Claim 16, the Office Action has not shown the required motivation to properly combine *Handelman* and *Scobey*; nor does such a motivation exist. Therefore, for at least these reasons, Applicants respectfully submit that Claim 23 is patentable over the cited art used in the rejection and request that the rejection of Claim 23 be withdrawn.

Claim 31 recites:

- communicating through a first transponder a first signal over a first optical channel space at a bit rate requiring a first spectrum width of the first optical channel space;

- communicating through a second transponder a second signal over a second optical channel space at a bit rate requiring a second spectrum width of the second optical channel space;

- increasing the first spectrum width of the first optical channel space by at least an amount equal to the second spectrum width of the second optical channel space to create a new optical channel space;

wherein the new optical channel space has a spectrum width at least equal to a sum of the first spectrum width of the first optical channel space and the second spectrum width of the second optical channel space;  
deactivating the second transponder after increasing the first spectrum width of the first optical channel space; and  
communicating through the first transponder a signal over the new optical channel space at a bit rate requiring the spectrum width of the new optical channel space.

The Office Action states that "the combination of *Handelman* and *Scobey* teaches the method of Claim 16, further comprising deactivating a transponder associated with the first or second optical channel space." Office Action, page 4. The Office Action cites to a portion of *Handelman* that discloses sending a message to providers of data carried over the channel wavelengths which are not within the selected group of N channel wavelengths instructing them to stop transmitting data. *See Handelman*, col. 17, lines 48-53. If this step occurs, there will be no optical signals to convert (thus, there will be no second or third optical channel spaces according to the reading of the Office Action). Thus, there is disclosure for deactivating a second transponder after increasing the first spectrum width of the first optical channel space. Moreover, as discussed above with respect to Claim 16, there is no disclosure of the other claimed elements. In addition, the Office Action has not shown the required motivation to properly combine *Handelman* and *Scobey*; nor does such a motivation exist. Therefore, for at least these reasons, Applicants respectfully submit that Claim 31 is patentable over the cited art used in the rejection and request that the rejection of Claim 31 be withdrawn.



Claim 32 recites:

communicating through a first transponder a first signal over a first optical channel space at a bit rate requiring a first spectrum width of the first optical channel space;

dividing the first spectrum width of the first optical channel space to create a second optical channel space having a second spectrum width and a third optical channel space having a third spectrum width;

wherein a sum of the second spectrum width and the third spectrum width is equal to or less than the first spectrum width;

communicating through the first transponder a signal over the second optical channel space at a bit rate requiring a spectrum width equal to or less than the second spectrum width; and

activating a second transponder to communicate a signal over the third optical channel space at a bit rate requiring a spectrum width equal to or less than the third spectrum width.

The Office Action cites to column 18, lines 44-59 as suggesting that activating a second and third transponder when the new channel space is created would be obvious. *See* Office Action, page 8. However, this cited portion merely discloses selecting the N channel wavelengths according to predetermined criteria, such as a preferred transmission bandwidth. *See Handelman*, col. 18, lines 57-59. This does not provide any possible motivation for "activating a second transponder to communicate a signal over the third optical channel space at a bit rate requiring a spectrum width equal to or less than the third spectrum width." Moreover, to the extent that the Office Action relies on *Handelman*, *Scobey* or their combination to disclose other elements of Claim 32, Applicants respectfully submit that such elements are not disclosed as discussed above with respect to Claims 20 and 22. In addition, the Office Action has not shown the required motivation to properly combine *Handelman* and *Scobey*; nor does such a motivation exist. Therefore, for at least these reasons, Applicants respectfully submit that Claim 32 is patentable over the cited art used in the rejection and request that the rejection of Claim 32 be withdrawn.


**CONCLUSIONS**

Applicant has made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicant respectfully requests full allowance of all pending claims.

If the present application is not allowed and/or if one or more of the rejections is maintained, Applicant hereby requests a telephone conference with the Examiner and further requests that the Examiner contact the undersigned attorney to schedule the telephone conference.

No fee is believed to be due. However, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,  
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